

**REMARKS**

Claims 1-3 and 7-13 are pending in this application. By this Amendment, independent claim 1 is amended for clarity and to even further distinguish over the applied references, claims 9 and 12 are amended for clarity and claims 2 and 3 are amended for consistency with claim 1. Support for the amendments to claims 9 and 12 can be found, for example, on page 18, lines 5-17 of the specification. No new matter is added. Reconsideration of this application in view of the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 9 and 12 under 35 U.S.C. §112, first paragraph. The rejection is respectfully traversed.

The Office Action asserts that the specification does not teach how the pressure-regulating means would be capable of controlling the pressure of the oxidation gas supplied to the pressure-regulating means independently from the oxidize gas in the cathode side. The Office Action also asserts that the specification fails to explain how the depressurizing the oxidation gas supplied to the pressure-regulation means would depressurize the fuel gas in the anode side. Yet, the specification discloses, for example, on page 18, lines 12-17, that the supply pressure of the hydrogen gas on the anode electrode side can be controlled by the opening and closing of the shutoff valve SV8 to control the pressure of the air applied to the diaphragm of the pressure regulating valve RG. Therefore, based on at least this portion of the specification, claims 9 and 12 do not fail the enablement requirement. Thus, it is respectfully requested that the rejection be withdrawn.

The Office Action rejects claims 9 and 12 under 35 U.S.C. §112, second paragraph. The rejection is obviated by the above amendments to claims 9 and 12.

The Office Action asserts that claims 9 and 12 are unclear because claims 9 and 12 recite an "oxidation gas pressure-regulating means" and a "pressure-regulating means."

However, the claimed "pressure regulating means" is introduced in independent claim 1.

Claims 9 and 12 introduce another pressure-regulating means that is distinguishable from the pressure-regulating means of claim 1 by the addition of "oxidation gas" before "pressure-regulating means." Regardless, claims 9 and 12 are further amended for clarity to specify that there are two separate pressure-regulating means a "pressure-regulating means" and an "oxidation gas pressure-regulating means." Thus, it is respectfully requested that the rejection be withdrawn.

The Office Action rejects claims 1-3, 8, 10, 11 and 13 under 35 U.S.C. §102(b) over Kazuo (JP-2002-352837). The rejection is respectfully traversed.

Kazuo fails to disclose all of the features of independent claim 1 for at least the following two reasons.

First, Kazuo does not disclose a fuel cell system having a circulation route that is connected to a fuel gas supply line such that fuel gas is returned to the fuel gas supply line upstream of a pressure-regulating means, as recited in independent claim 1. In Kazuo, a fuel gas feeder current way L1 is connected to a fuel gas circulating flow way L2 at a position of ejector pump 4 (see Fig. 8). As such, Kazuo does not disclose that fuel gas feeder current way L1 is connected upstream of a pressure-regulating means. Therefore, Kazuo does not disclose a fuel cell system having a circulation route that is connected to a fuel gas supply line such that fuel gas is returned to the fuel gas supply line upstream of a pressure-regulating means, as recited in independent claim 1.

Second, Kazuo does not disclose a fuel cell system having a control unit that outputs a control signal to a fuel gas pump to control fuel gas that is circulated in a circulation route, as recited in independent claim 1. In Kazuo, a circulation control valve (regulator) 8 is provided on the fuel gas circulating flow way L2, not a fuel gas pump as recited in independent claim

1. As such, Kazuo fails to disclose an active circulating means such as a fuel gas pump disposed on the circulation route.

In the system of Kazuo, an operational stability depends on pressure stability in the circulating flow way L2 due to the ejector pump 4 performing negative pressure control. The pressure of the fuel gas exhausted from the fuel cell to the circulating control valve (regulator) 8 depends upon the amount of generated electric power. Pressure fluctuation of the exhausted fuel gas is further delayed by the regulator and is conveyed to the ejector pump 4 so that the fuel gas pressure output from the ejector pump 4 may become unstable.

In contrast to Kazuo, in the combination of features recited in independent claim 1, fuel gas is provided without any delay from a controllable fuel gas pump in a circulation route. Therefore, the amount of the fuel gas provided by the regulator or the response characteristic of the regulator does not have much of an affect on the operational stability. Further, as a result of the features of claim 1, only the drive load of the fuel gas pump decides the circulation amount of the fuel gas so that the fuel gas pressure can be substantially stable. Kasuo fails to disclose the features of independent claim 1 and the resulting benefits.

Therefore, independent claim 1 and dependent claims 2, 3, 8, 10, 11 and 13 are patentable over Kazuo. Thus, it is respectfully requested that the rejection be withdrawn.

The Office Action rejects claims 7 and 8 under 35 U.S.C. §103(a) over Kazuo in view of Morishima et al. (Morishima), DE 10331261 (equivalent to U.S. Patent No. 7,105,423). The rejection is respectfully traversed.

Because claims 7 and 8 incorporate the features of independent claim 1, and because Morishima fails to overcome the deficiencies of Kazuo, these claims also are patentable over the applied references for at least these reasons, as well as for the additional features that these claims recite. Thus, it is respectfully requested that the rejection be withdrawn.

The Office Action provisionally<sup>1</sup> rejects claim 1 on the ground of obviousness-type double patenting over claims 1-15 of U.S. Patent Application Publication No. 2008/0220303 A1, which corresponds to U.S. Patent Application No. 10/585,761. The rejection is obviated by the attached Terminal Disclaimer. Thus, it is respectfully requested that the rejection be withdrawn.

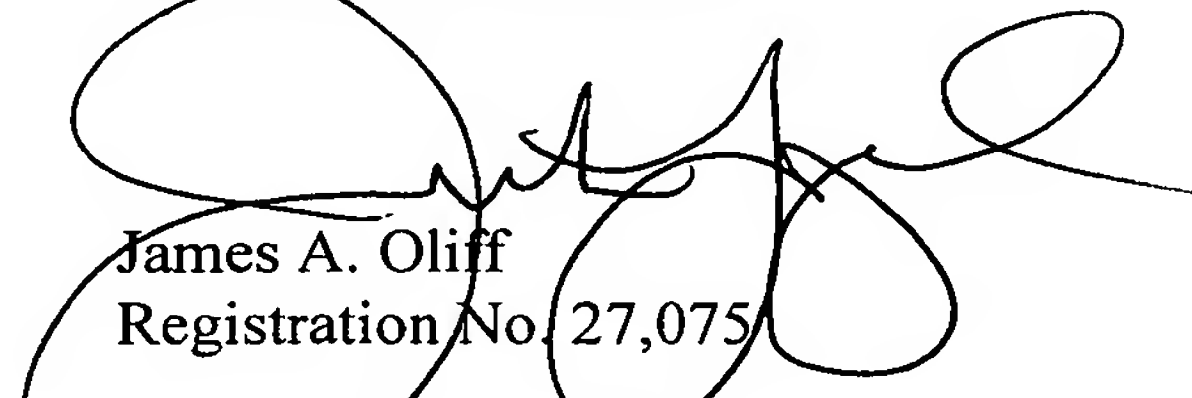
In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

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<sup>1</sup> The Office Action fails to list this rejection as provisional. The rejection is provisional because U.S. Patent Application Publication No. 2008/0220303 A1 has not yet issued as a patent.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Justin T. Lingard  
Registration No. 61,276

JAO:JTL/emd

Attachment:  
Terminal Disclaimer

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

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